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ABSTRACT

This study concerns the sociometric group patterns of two grades of elementary school children in a voluntarily integrated magnet school. A sociometric measure was administered to two grade levels of this school on a repeated measures design. The grades were the first and the fifth. Each child was asked to complete the sociometric measure which asked for three positive choices in a play situation and three positive choices in a study situation. Basically each child was asked to state which three persons in the class he would most like to play with. Then he was asked to name those three he would like to study with. Findings indicated the following: (1) Neither grade displayed a tendency to group on cross sex within their own races. Cross race groups, however, were noted in all administrations and did not appear to either increase or decrease in frequency over time. (2) There appeared to be a difference in the pattern between grades. The first grade children appeared to remain rather stable in the pattern of the groups, and to have smaller grouping than did the fifth graders. Females at the fifth grade level appeared to be slightly more clique oriented. Several large groups of all female white or all female black composition were noted. (3) There did not seem to be any differences between the questions of play and study. (4) The size of the group may have had an effect on the composition. (5) The major conclusion is that these children did not seem to have broken into four static groupings on the basis of sex and race. (Author/AM)

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GROUP COMPOSITION IN A VOLUNTARILY INTEGRATED SCHOOL

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The process of desegregation in public education is currently an ongoing, controversial, and costly issue. The implicit assumption of desegregation plans seems to be that a major deterrent of interracial hostility is lack of interpersonal relations between racial groups. The proponents of this philosophy seem to hold the idea that if members of opposite groups could get to know each other, hostility could be reduced.

This study concerns the group patterns of two grades of elementary school children in a voluntarily integrated magnet school. Each child in the first and fifth grades responded on a repeated measures design to a sociometric choice instrument.

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Sociometry from its inception has been used to explore questions pertaining to minority group integration. The first study using sociometric measures to study the structure of racial groups is reported by Moreno in 1934. He administered a sociometric test to children in kindergarten through eighth grade in a school where 2% of the children were black. The results of his study showed that own sex choices predominated by the second grade and own race choices appear by the fourth grade and continue to decrease through the eighth grade (6).

Criswell continued Moreno's studies in the early 1940's (3). His findings substantiate those reported above. He adds, however, that there is variability among different classrooms and that the size of the minority group affects the children's sociometric choices.

Other researchers have continued to study the issue of minority group size although no concensus of findings has been reached concerning minority group membership on children's sociometric choices. Shaw (9) combined a sociometric instrument with observational methods to test the effects of interracial association following forced integration in an elementary school. Each child in the fourth through sixth grades was asked to name three persons he most preferred and three persons he least preferred to be with. The sample was made up of 50 black children and 183 white children. Results were not reported separately for each sex. Black children and white children at all three grade levels chose fewer members of the other race than would have been expected by chance. Shaw goes on to state that as the size of the minority group (blacks) increased, the percentage of cross race interactions decreased.

Bartel, Bartel and Grill (1) in a study of integrated open classrooms indicate that age differences can be found even when the percent of minority group size is controlled. They administered a sixteen item sociometric test to 160 children in kindergarten through grade four. The numbers of black and white children were approximately equal in each class. Data were presented for the five grade levels. The mean number of black

children chosen for the 'positive intellectual questions' decreased across grade levels while the negative intellectual choices increased for black children from kindergarten through grade four. In the social area, preference for a child's own race increased from kindergarten to grade four with almost total polarization occurring by grade four.

Another study conducted by McCandless and Hoyt (5) found that in a similar population boys played more with boys and girls with girls. When sex was disregarded, white children played primarily with other white children and black children played with black children. They conclude that "children in one group do not actively avoid members of the other group, but differentially approach the members of their own group" (5, p. 95).

Dwyer conducted a sociometric study of seven elementary schools in Missouri (4). None of the school populations reported in this study were more than 10% black. He found, within his sample, that fifth graders were more conscious of desegregation than the other grade levels. The lower the grade level, the more readily an adjustment toward integration is made. Boys made earlier adjustments than did girls. The greater amount of interaction took place in the less socially intimate situations. And lastly, time seemed to encourage interaction.

Additional studies concerning the effect of racial group composition can be noted throughout the literature. Conclusions vary. For example, Nancy St. John, in her book School Desegregation Outcomes for Children, cites sixteen examples of sociometric studies done in racially integrated school settings (8). She

states that the findings over the past thirty years are quite stable in that "ethnic own group preference appears to be a universal phenomenon. But it is not clear whether such preferences indicate positive self-concept and ethnic identification or rejection of and hostility to the other groups" (8, p. 67).

Other authors conflict with St. John's statement. Webster states:

> An analysis of successful contact situations seems to reveal three requisite factors: equal status of the participants in the situation, contact of sufficient duration and intimacy, and the sanction or support of a higher authority (10, p. 292).

Carithers reviewed studies dealing with the effects of interracial contact in desegregated schools (2). Her review includes studies using methodologies other than sociometry. She states:

> There is no general agreement about the effects of interracial contact on attitude change. Some studies have found heightened tolerance; some heightened resistance; some no change. There seems to be, however, a general agreement that interracial contact per se will not bring about increased tolerance or acceptance (2, p. 41).

Carithers does, however, list several patterns of behavior which have emerged from a review of the literature. The child, as early as three, is aware of racial difference. The child holds attitudes that are greatly dependent upon his perceptions of parental, peer, and school attitudes and upon his perceptions of their support for his attitudes. The demonstrated preference of white for white and black for black may be changing in today's society. The cleavage of groups begins in early elementary school with boy-boy and girl-girl groupings and moves upward with age along racial lines until adolescence. The black boy seems

better able to adjust and is more accepted in interracial situations than is the black girl. Lastly, there is no general agreement about the effects of interracial contact on attitude change (2, pp. 39-40).

During the summer of 1975, the elementary school which serves as the test population for this research was ordered by the United States District Court to desegregate. Prior to this time, the entire school population housed in the particular location consisted of approximately 300 black children in grades one through six. Rather than busing these children to predominantly white schools within the school district, the school administration chose a magnet school desegregation plan.

Volunteer white children were recruited to attend the magnet school. Each white volunteer child was matched with a black child of the same sex and grade level. This provided a research control which is unique in educational settings. A matched sample on the variables of sex, race, grade level, and socioeconomic status resulted. The school enrolled volunteer children by matching grade level, sex and race. For example, if a black girl in grade two attended school, then a white girl in grade two was enrolled as a volunteer. In addition, all of the children live in the same geographical area of a major city and can be classified as having middle class socioeconomic status. Because of this, the uniqueness of the school in its balance of student population on the variables of sex, race, and social class benefit this study. No one group can be pointed out as a minority group within the school setting.

A sociometric measure was administered to two grade levels of this school on a repeated measures design. The grades were first grade and fifth grade. Grade one was selected because the children were beginning their school careers. These children had not attended school for an extended period of time and were still heavily influenced by parental guidance. In addition, they had not attended this public school on a full basis until six weeks prior to the pretest administration. Therefore, most of the children were unacquainted.

Grade five was selected to represent the middle grades. The children were ten or eleven years old. They had not yet reached adolescence. However, they had attended school for a number of years and probably conformed to peer group influence as well as home influence.

Each child was asked to complete the sociometric measure which asked for three positive choices in a play situation and three positive choices in a study situation. The first grade children had the measure administered orally by a teacher or a teacher's aid because it was reasoned that they might not be able to read or write their own choices. Each child was asked to state which three persons in his class he would most like to play with. Then he was asked to name those he most liked to study with. The teacher recorded the responses. The fifth grade children were asked to complete the instrument in a group, writing their own answers. Any child who was absent at the time of administration was asked to complete the instrument when he returned to school. The race and sex of each child was obtained

at this time from homeroom lists.

Three administrations of this sociometric testing are reported. The first administration took place during the fall of 1975, approximately six weeks after school had started. A second administration was completed during May of 1976 and a third during September of 1977. The same testing procedures were used for all three administrations.

The data from these administrations were tabulated by group membership utilizing the NARSOC computer program (7). A group is defined as all persons who have mutual choices on a question. Each question, play and study, is handled separately. Persons with no mutual choices are placed in quasi-subgroupings. The data from these quasi-subgroups are presented separately in Table I.

A test of significance was used to determine if there was a difference in the frequency of membership in the quasi-subgroupings on the basis of sex and race. A chi square test was used for the first grade and a Fisher's Exact for the fifth grade. No significant differences were determined except for the first administration of the play question in the first grade. This indicates that the frequency of quasi-subgroupings have not changed significantly over the time period and that no one group is rejected consistently more than another group.

Tables II, III, IV, and V show the group composition of each of the grades on the questions of play and study. The frequency of the groups by size and makeup are shown along with the total number of groups for each classification. The group composition

is classified in the following manner: all female white, all female black, all male white, all male black, mixed female, mixed male, mixed white, mixed black, or mixed on both sex and race. No tests of significance were calculated for these data.

Several observations can be made. Neither grade displays a tendency to group on cross sex within their own race. Cross race groups, however, can be noted in all administrations and do not appear to either increase or decrease in frequency over time.

A second observation is that there appears to be a difference in the patterns between grades. The first grade children appear to remain rather stable in the pattern of the groups. They also appear to have more smaller groupings than do the fifth grade. Females at the fifth grade level appear to be slightly more clique oriented. Several large groups of all female white or all female black composition can be noted.

There does not seem to be any differences between the questions of play and study.

The size of the group may have an effect on the composition. Except for the fifth grade girls, there does seem to be a tendency for the racially mixed groups to be slightly larger than the non-racially mixed groups. Those children who are members of larger social groups seem to be more willing to choose across racial lines.

The major conclusion at this time is that these children do not seem to have broken into four static groupings on the basis of sex and race. This seems to indicate that the proximity of the racial groups have not increased integration over time.

However, conversely the group composition patterns do not seem to have altered. Perhaps, if an intervention model were introduced into the educational setting, racial integration could be increased.

TABLE I

FREQUENCIES AND TESTS OF SIGNIFICANCES* FOR RELATIONSHIP BETWEEN SEX AND RACE OF STUDENTS IN QUASI-SUBGROUPS

	Female White	Female Black	Male White	Male Black	χ^2 df=1
Play (1st)					
Fall 1975	8	11	16	4	4.42**
Spring 1976	9	9	17	6	1.56
Fall 1976	4	13	11	9	2.58
Study (1st)					
Fall 1975	11	12	10	7	.14
Spring 1976	14	16	20	11	1.31
Fall 1976	8	13	12	12	.25
Play (5th)					Fisher Exact
Fall 1975	4	5	1	2	N.S.
Spring 1976	2	5	3	3	N.S.
Fall 1976	4	7	5	1	N.S.
Study (5th)					
Fall 1975	1	7	2	2	N.S.
Spring 1976	2	7	4	6	N.S.
Fall 1976	4	7	6	2	N.S.

*Chi square test used for Grade 1, Fisher's Exact used for Grade 5.

**$p \leq .05$

TABLE II

GROUP COMPOSITION OF GRADE 1
ON PLAY QUESTION

Fall 1975

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	4			2					
3	1			1		1			
4		1		1	1			1	
5		1				1	2		
6					1				
7									
8									
9									
Total	5	2	0	4	2	2	2	1	0

Spring 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2			3	2	1				
3	3			2	1	1			
4		3				2			
5					1				
6									
7									
8									1
9									
Total	3	3	3	4	3	3	0	0	1

Fall 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	2	2	2	2					
3		1		1		1			
4	1	1	1		2				
5									
6									
7									
8									1
9									1
Total	3	4	3	3	2	1	0	0	2

TABLE III

GROUP COMPOSITION OF GRADE 1
ON STUDY QUESTION

Fall 1975

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	1	1		4		1			
3	1	2	1	1	1				
4					1		1		1
5									
6									
7					1	1			
Total	2	3	1	5	3	2	1	0	1

Spring 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	1	1	2	3	2	1			
3	1					1			
4					1		1		
5						1			
6									
7					1				
Total	2	1	2	3	4	3	1	0	0

Fall 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	2		5	2		2		1	
3		1	2		2				
4					1				
5		1							
6					1				
7									
Total	2	2	7	2	4	2	0	1	0

TABLE IV

GROUP COMPOSITION OF GRADE 5
ON PLAY QUESTION

Fall 1975

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	1	4	3		1	1	1		
3	2	2				1			
4	1				1				
5	1					2			
6									
7									
8						1			
9									
Total	5	6	3	0	2	5	1	0	0

Spring 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	3		1						
3	1	1			1	1			
4						2			
5	1					1			
6					2				
7									
8					1				
9						1			
Total	5	1	1	0	4	5	0	0	0

Fall 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2		3		2					
3	1				1				
4		1			1	1			
5						2			
6									
7	1								
8									
9	1					1			
Total	3	4	0	2	2	4	0	0	0

TABLE V

GROUP COMPOSITION OF GRADE 5
ON STUDY QUESTION

Fall 1975

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	2	3	1	1	2				
3	1					2			
4	2					1		1	
5					2				
6									
7						1			
8									1
Total	5	3	1	1	4	4	0	1	1

Spring 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	2	2	1						
3		1			1				
4	1		1		2	2			
5	1				1				
6									
7									
8						1			
Total	4	3	2	0	4	3	0	0	0

Fall 1976

Group Size	FW	FB	MW	MB	F	M	W	B	Mixed
2	3	1	1	2		1			
3	2	1							
4	1	1				1			
5					1	1			
6					1				
7									
8						1			
Total	6	3	1	2	2	4	0	0	0

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